REMARKS

Reconsideration of the application is requested in view of the remarks below. Claims 1-26 are pending in the appplication. Applicants appreciate the Examiner's suggestion to insert a semicolon in the penultimate line of Claim 1.

Rejections Under 35 USC 112, second paragraph

The Office Action rejected Claim 2 under 35 USC §112, second paragraph, as indefinite. In view of the modification made to Claim 2, the rejection is believed overcome. Reconsideration is requested.

Rejection Under 35 USC 102

The Office Action's rejection of Claims 1-3, 6 and 26 under 35 USC 102(b) over U.S. 5,266,237 (Freeman) should be withdrawn.

Applicants' invention relates to a conditioning agent for conditioning a water component selected from the group consisting of standing water systems and flowing water systems. The conditioning agent includes a component in tablet form selected from the group consisting of (1) an active content of a polysuccinimide component selected from the group consisting of polysuccinimide, partial hydrolysates of polysuccinimide, copolymers of polysuccinimide; and mixtures thereof; and (2) a fatty acid.

Freeman discloses detergent compositions formulated with polysuccinimide. Formulating detergents with polysuccinimide enhances soil removal and anti-redeposition properties of the detergent. Polysuccinimide, which is a granular solid, is easily formulated into granular or powdered detergent compositions. (See Freeman, Brief Description of the Invention). One preferred Freeman composition includes (a) from 0.5 to about 50 percent by weight polysuccinimide; (b) from 0 to about 50 percent by weight of one or more surfactants; and, in addition to the polysuccinimide, (c) from 0.5 to about 85 percent by weight of one or more builders.

Freeman does not anticipate Applicants' invention. Freeman's detergent compositions, which require a combination of polysuccinimide and one or more builders, do not anticipate Applicants' fatty acid-containing conditioning agents. Freeman simply does not disclose a conditioning agent selected from the group

consisting of standing water systems and flowing water systems comprising a component in tablet form selected from the group consisting of (1) an active content of a polysuccinimide component selected from the group consisting of polysuccinimide, partial hydrolysates of polysuccinimide, copolymers of polysuccinimide; and mixtures thereof; and (2) a fatty acid. Reconsideration is requested.

Rejection Under 35 USC 103

A. The rejection of Claims 4-5, and 7-8 under 35 USC 103 over Freeman should be withdrawn.

It is well established that to establish a *prima facie* case of obviousness, the USPTO must satisfy all of the following requirements. First, the prior art relied upon, coupled with the knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or to combine references. *In re Fine*, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Second, the proposed modification must have had a reasonable expectation of success, as determined from the vantage point of one of ordinary skill in the art at the time the invention was made. *Amgen v. Chugai Pharmaceutical Co.* 18 USPQ 2d 1016, 1023 (Fed Cir, 1991), *cert. denied* 502 U.S. 856 (1991). Third, the prior art reference or combination of references must teach or suggest all of the limitations of the claims. *In re Wilson*, 165 USPQ 494, 496, (CCPA 1970). In view of the modifications above, the Office Action did not establish a *prima facie* case of obviousness.

Applicants' invention encompassed by these claims relates to a conditioning agent for conditioning a water component selected from the group consisting of standing water systems and flowing water systems comprising a component in tablet form selected from the group consisting of (1) an active content of a polysuccinimide component selected from the group consisting of polysuccinimide, partial hydrolysates of polysuccinimide, copolymers of polysuccinimide; and mixtures thereof; and (2) a fatty acid. In one embodiment, the conditioning agent further comprises a dispersant component selected from the group consisting of tannin derivatives, lignin sulfonates, sulfonated condensation products of naphthalene with formaldehyde, polyacrylates, polymethacrylates, polyacrylamides, acrylate-based

polymers, P-containing polymeric compounds, phosphinic-acid-containing homopolymers and copolymers of acrylic acid and acrylamide, oligomeric phosphinico-succinic acid compounds, sulfomethylated or sulfoethylated polyacrylamides and copolymers and terpolymers with acrylic acid and maleic ester, N-butylacrylamide, copolymers thereof, acrylamidopropionic sulfonic acid (as salt) and its copolymers, polymers and copolymers of maleic acid or maleic anhydride, phosphinoalkylated acrylamide polymers, copolymers with acrylic acid, and copolymers of alkenes with unsaturated dicarboxylic acids. In another embodiment, the conditioning agent contains biocides. In another embodiment, the polysuccinimide component is in a form in which the polysuccinimide has an increasing slow-release action.

One of ordinary skill in the art following the teachings of Freeman would not have been motivated to modify Freeman and make Applicants' invention. In Applicants' invention, the fatty acid allows the polysuccinimide to be pressed into stable tablets such that both components are slowly soluble in water. By contrast, Freeman describes detergent formulations that require quick solubility in water and therefor he uses sodium stearate. Sodium stearate in detergents is used as an antifoaming agent (see Louis Ho Tau Tai: Formulating Detergents and Personal Care Products, AOCS Press, Champaign, IL, USA, 2000, copy enclosed). Because Sodium stearate is a salt, its fastening character is very low. By contrast, stearic acid as used in the formulation examples has a softening point at 70° C. That means under pressure (as used for tabletting) stearic acid is melting. The melting points of salts such as sodium stearate are much higher so that they are not such good additives for tabletting.

In other words, Freeman teaches an invention encompassing a totally different use of polysuccinimide and such use in detergent formulations requires additives of different activity in water than what is claimed in the present invention. Reconsideration is requested.

B. The rejection of Claim 8 under 35 USC 103 over Freeman in view of U.S. Pat. No. 5,662,518 (Wood) should also be withdrawn.

Applicants invention encompassed by Claim 8 relates to a conditioning agent for conditioning a water component selected from the group consisting of standing

water systems and flowing water systems comprising a component in tablet form selected from the group consisting of (1) an active content of a polysuccinimide component in a form which the polysuccinimide has an increasing slow-release action selected from the group consisting of polysuccinimide, partial hydrolysates of polysuccinimide, copolymers of polysuccinimide, and mixtures thereof; and (2) a fatty acid.

One of ordinary skill in the art following the teachings of Freeman would not have been motivated by Wood to modify Freeman and practice Applicants' invention. Wood teaches the incorporation of fatty acids into the polymer chains of maleic acid-ammonium polymers (such as polysuccinimide or polyaspartic acid). As a consequence, such fatty acids become an integrated part of the polymer molecule itself (see column 3, lines 22 - 37). The consequence of such an inclusion of fatty acids into polymers is to raise their hydrophobicity. Such an effect is not intended by Applicants' invention. Here the fatty acid is part of the formulation that increases the stability of the tablet and is not used to increase polysuccinimide's hydrophobic or hydrophilic behavior.

In view of the foregoing amendments and remarks, allowance of the pending claims is earnestly requested.

Respectfully submitted,

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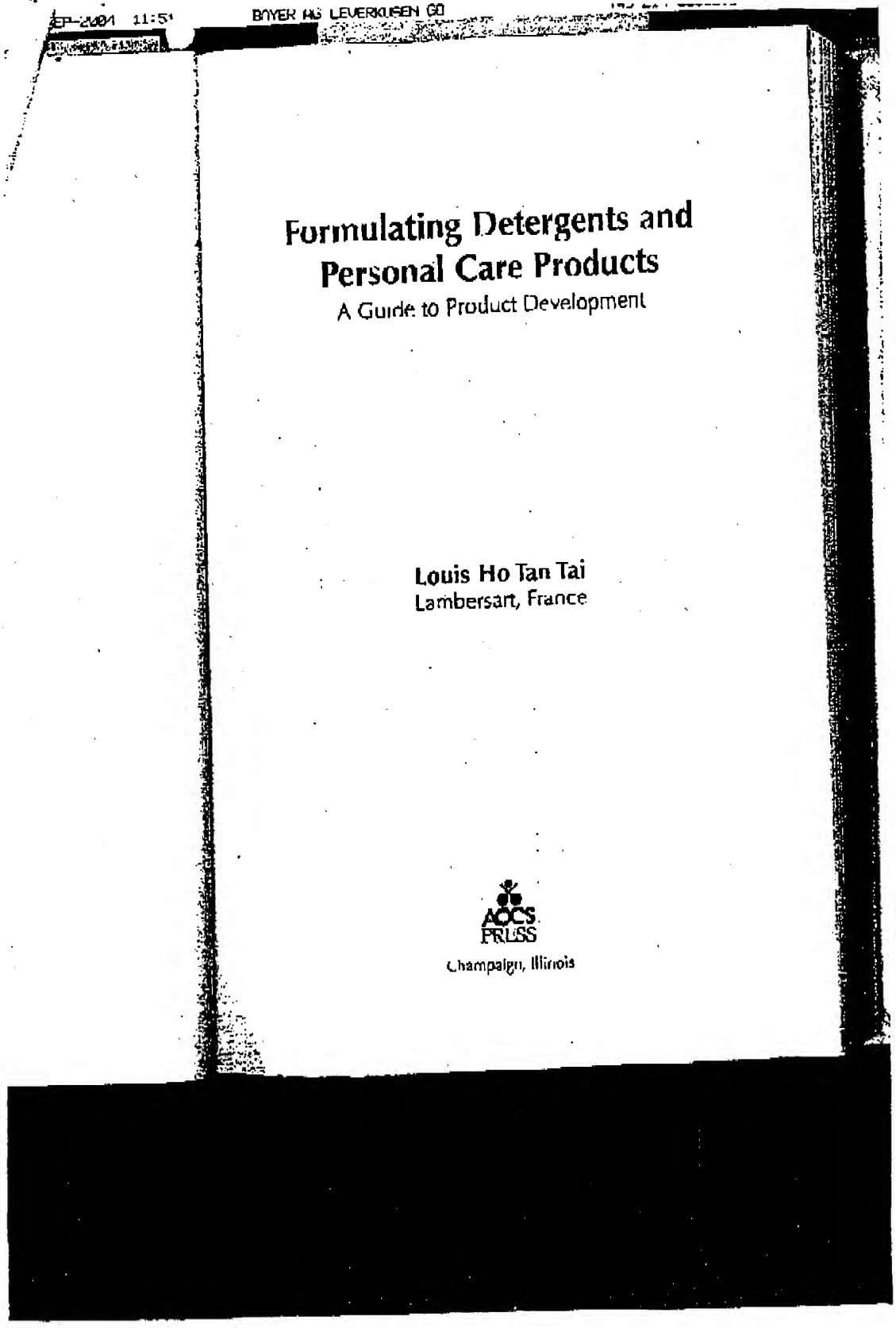


Formulating Detergents and Personal Care Products

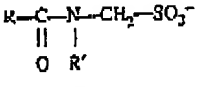
A Guide to Product Development

Louis Ho Tan Tai
Lambersart, France

AOCS PRESS
Champaign, Illinois

In Europe, soap is used in detergents only as an antifoaming agent. It is also used in liquid detergents and soap-based shower gels. In developing countries, it is used for all-purpose products. Soap manufacturing processes are covered in detail in Chapter 12.

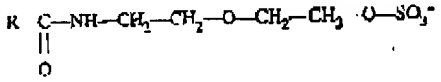
Sulfoalkylamides of fatty acid (N-alkyl taurides) have the following chemical formula:



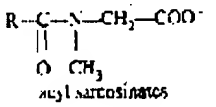
If R′ – CH_3 → *N*-methyl tauride

The advantages of these products include foaming ability, lime soap-dispersing properties, and a feel similar to that of soap-based formulas.

Diglycolamide sulfates are not unstable in an aqueous solution and can be used in shampoos. The formula is as follows:



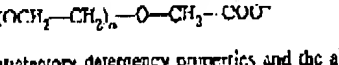
N-Acyl amino acids include acylsarcosinates; the formula is as follows:



acyl sarcosinates

The salts of *N*-acyl amino acids have good foaming and detergency properties. They are more soluble in hard water than soap and are not too aggressive on skin or hair. They give a soft feeling to hair and skin.

Polyoxyethylene carboxylates have the following chemical formula:



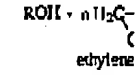
These derivatives have satisfactory detergency properties and the ability to disperse lime soap (the same properties as the *N*-acyl amino acid salts); when *n* is high, they are compatible with electrolytes. They are easy to rinse off and are soluble at a low pH.

Nonionics. This group includes fatty alcohol polyethylene glycol ether or fatty alcohol ethoxylates, ethylene oxide and propylene oxide copolymers, amine oxides, alkylamines, alkanolamides, polyglycerol esters, alkyl polyglucosides, and fatty acid *N*-alkylglucosamides.

Sulfa

Alcohol ethoxylates (AE)

Among commercial nonionic
are the most commonly used
fatty alcohol into a nonionic

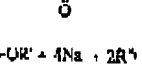


ethylene

There are a number of proce
among the main ones:

(i) Primary alcohols. The cl

(ii) Natural alcohols. Natura
fats. Although there are
most common is the rea
the following equations:



ester alc

(iii) Synthetic alcohols. In t
with a triethyl-aluminum